

AMENDMENTS

Amendments to the Claims:

The following listing of claims replaces all previous listings or versions thereof:

- 1.-44. (canceled)
45. (previously presented) An isolated sentrin-specific protease (SENP) polypeptide comprising the amino acid sequence $\text{PIH}^{\text{L}}/\text{R}\text{XVHW}$ wherein X is a glycine, lysine or glutamic acid.
46. (previously presented) The isolated polypeptide of claim 45, comprising at least 25 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
47. (previously presented) The isolated polypeptide of claim 45, comprising at least 50 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
48. (previously presented) The isolated polypeptide of claim 45, comprising at least 100 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
49. (previously presented) The isolated polypeptide of claim 45, comprising at least 150 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
50. (previously presented) The isolated polypeptide of claim 45, comprising at least 200 contiguous amino acid residues of SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.
51. (previously presented) The isolated polypeptide of claim 48, further comprising amino acid residues 400 to 509 of SEQ ID NO: 8.
52. (canceled)
53. (previously presented) The isolated polypeptide of claim 48, further comprising amino acid residues 461 to 568 of SEQ ID NO: 10.
54. (previously presented) The isolated polypeptide of claim 45, comprising SEQ ID NO: 2, SEQ ID NO: 8, or SEQ ID NO: 10.

55. (previously presented) An isolated polypeptide comprising a sentrin-specific protease SENP1.
56. (previously presented) The isolated SENP1 polypeptide of claim 55, comprising at least 25 contiguous amino acids of SEQ ID NO: 2.
57. (previously presented) The isolated polypeptide of claim 55, comprising at least 50 contiguous amino acids of SEQ ID NO: 2.
58. (previously presented) The isolated polypeptide of claim 55, comprising at least 100 contiguous amino acids of SEQ ID NO: 2.
59. (previously presented) The isolated polypeptide of claim 55, comprising at least 150 contiguous amino acids of SEQ ID NO: 2.
60. (previously presented) The isolated polypeptide of claim 55, comprising at least 200 contiguous amino acids of SEQ ID NO: 2.
61. (canceled)
62. (canceled)
63. (previously presented) The isolated polypeptide of claim 55, wherein the SENP1 polypeptide comprises SEQ ID NO: 2.
64. (previously presented) A method of purifying a sentrin-specific protease SENP1 polypeptide from a sample comprising collecting a sentrin-specific protease polypeptide sample; incubating the sample with an antibody that specifically binds the SENP1 polypeptide; and obtaining the SENP1 polypeptide.
65. (previously presented) The method of claim 64, wherein the purified SENP1 polypeptide comprises the amino acid sequence of SEQ ID NO: 2.